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# Several Problems of Established Energy Strategy of China Scientifically

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## Abstract

Since the reform and opening up, the energy strategy and policy of China have got significant achievement, but it still exists a great space to improve. Maybe the most important problem lay on the following : In consciousness, it needs the constraint of “determinacy” and “Indeterminacy” on conception and form the conscious behavior of “Sustainable Fairly Large-scale”. Tactically, introspect the overall consideration between energy self-sufficient of China and the development of international energy market, explore and utilize disposable energy effectively by energy saving and emission reduction. At the same time, we should pay high attention to the game of Energy Strategy with other leading powers; especially establish the strength of ocean as soon as possible, which can guarantee our energy supply security and stability.

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*Keywords* :Law of multiple impossible; Complexity of Market Economy; Sustainable Fairly Large-scale; Increase Revenues and Reduce Expenditure; Game of Energy Strategy; Strength of Ocean

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## 1. Introduction

Since the reform and opening , the Chinese government attach high importance to energy problem , publish and carry out a series of policies ,including energy development , energy conservation and emission reduction, energy technology, energy economics, and energy import and export ,which contribute to the energy production rising rapidly , the construction of major programs achieving new progress constantly , the intensity of using energy declining substantially ,and the reformation of energy industry management system promoting continually. No further elaboration, China has made a great progress in the aspect of energy development. For example, total energy yield increased twice , meanwhile, it have gotten great achievement in the aspects of coal production, oil and gas exploration and development, construction of hydropower stations, nuclear power development, and the development of renewable energy. In spite of the outstanding achievements in energy industry, there are a lot of profound

problems not being settled down, which means that the prospect of Chinese energy development still faces challenges in the future, such as the extending demand-supply gap, the increasing degree of external dependence, the whole benefit of energy industry which needs to be improved, and the energy service quality which needs further improvement.

With the requirement and contention for energy strengthened in the world wide, various countries, according to their own national conditions, comprehensively consider such factors as local economic development, energy reservation, energy efficiency, future energy demand forecasting, and the restriction of Environmental conditions to set up national energy strategy, take relative measures, and alleviate energy problem. For instance, they adjust the structure of energy consumption in order to avoid singleness, develop new energy sources actively, establish new offshore oil base, carry out energy saving research, and take energy conservation measures. In view of this, our country is extremely necessary to establish national energy strategic with legally binding to ensure sustainable development of economic society in modernization process.

## **2. Some concepts of conscious needed to form**

To establish China's energy strategy scientific, firstly, we must form conscious of its national energy strategy with two constraints of "certainty" and "uncertainty", as well as "sustainable moderate scale" and other concepts to ensure that the correct point.

### *2.1 Constraint of "certainty"*

The so-called constraint of "certainty" means that the warning of Club of Rome that the Earth's resources is limited, economic growth can not be unlimited. "The process of economic development, in fact, is the use of more energy, to improve the productivity and effectiveness of human labor process. In fact, the best indicator of the wealth of all mankind is the amount of energy consumed per person." (Dannis L. M. 1997) "Seventeenth Report" making "Resource and environmental costs of economic growth is too large" the first problem, (Hu Jintao, 2007) this has been reflected our vigilance with it. In addition, the limits warned by the "law of multiple possible," the infinite supply of resources and the ability of environmental pollution purification infinite is impossible; The former two limited but scientific and technological development unlimited (the problem is that before the new theory in the effective discovery or invention of new technology the human may have plunged into disaster) can not be possible; that energy that can be transformed and can be used practically unlimited can not be possible; as well as "impossible of to be accurately predicted" (Dannis. 1997), etc., to give attention. Because, trends revealed according to law, with its negative judgments, necessity, absolute, such as "perpetual motion machine can not be made out", "no free lunch", etc., the judge is often only with a certain probability, relativity. In view of this, the certainty contained in "impossible" constraints is more than "possible" constraints contains.

### *2.2 constraint of "uncertainty"*

The so-called "uncertainty bound" means that the challenges of complexity of the market economy, that complexity is bound to create uncertainty, face the existence of uncertainty in a market economy and form consciousness of it, is far better than the blind of it or ignoring it. Complexity is the essential nature of the market economy. Whether recognized or not, it is difficult to falsification: if the market economy is spontaneously formed, it is a self-organizing system, with non-design, thus it is hard to be "exactly" plan;

If the market economy is open in time and space dimension, it is a far from equilibrium dissipative structures, with a dynamic, and thus "balance" is only the very state; If the market economy is based on human, and emphasis on freedom of choice of human subject individual, it is a complex system of personal, its future with uncertainty, making it difficult to "complete" control or "absolute" control. Neo-classical paradigm find it difficult to say a word, but to adopt the "ostrich policy" indifferently. However, to establish the national energy strategy scientific, can not but consider the objective existence and the potential impact of the uncertainty of market economy, the broke out and great damage of several oil crisis of modern history is proof. For market economies, in fact, only "there is always uncertainty" is the most identifiable.

### 2.3 " Sustainable Fairly Large-scale "

Classical economics believing in the human center theory, just concerned about "resource allocation" and "product configuration" ,but ignored the "scale." (Herman E.D. 2001) and as the dominant principle of the current allocation, the mainstream economics and the economic system built on this basis are to blame to the damage of the environment. The late 20th century, the international academic community once raised continued growth and rational lasting development (Roma, 1972), sustainable development (UN world and environmental development committee, 1987), balanced development (John M. L. 1998) and comprehensiveness development (Ignacy S. 2004; Sarah C. 2006), which reflects the concern of Western scholars from economic growth to economic development trends in the evolution of the continuing in-depth. Scientific development focus on economic and social sustainable development, so we should not only to concern "resource allocation" and "product configuration", but also more concerned about "scale." Scale Intently means that the ecosystem scale of human existence in the physical scope or scale, So-called sustainable moderate scale is according to China's present condition, for a given population, resources and environment and system under constraint conditions to discuss the sustainable development of moderate amount and structure of scale. Among them, the "sustainable" is the goal, "moderate" is the criterion, sustainable and moderate complementary is research method, in line with the principle of complementarity of sustainable modest "amount and structure" is the result. In fact, from John Stuart Mill to John Maynard Keynes and then to John Kenneth Galbraith, they have pointed out that when economic development reaches a relatively affluent standard of living of the people, it should be advocated, the concept of "Enough is enough". Only grasp the "sustainable moderate scale" and to resort to practices, to effectively alleviate the excessive growth in energy demand pressure ang complete the "Seventeenth Report" required "to achieve the speed and structure of the quality and efficiency, economic development and population resources and environment coordination, so that the people in the favorable environment in the production and living, to achieve economic and social sustainable development." (Hu Jintao, 2007)

### 3. Several strategies need to be carefully studied

Science to the country's energy strategy needs effective and practical strategies group to support, such as hot debate in academic of upholding saving energy, improving energy efficiency; accelerating energy structure adjustment, vigorously develop clean energy, positive development and utilization of renewable energy, and cultivating national energy saving consciousness, learning from foreign advanced technology and experience, using legal and economic measures, promoting energy development strategy implementation, etc. Among them, the overall consideration of energy expenditure is fundamental, paying attention to the country's energy strategy game is the key to ensure the security and stability of the energy supply is imminent.

### *3.1 balanced energy expenditure*

For China which is energy shortage and the consumption of energy superpower balancing energy expenditure is the fundamental of foothold its national energy strategy .

First is open source, that is integrated China's energy self-sufficiency with the development of the international energy market. But it is necessary to develop nuclear power, wind, solar and other new energy production capacity, develop oil and gas exploration and mining and "on-site reserves (slow mining)" planning for a rainy day. Meanwhile, we must make great efforts to develop the international energy market, establish multilateral energy supply channels, especially with the Middle East, South America's oil producers and Russia to maintain close cooperation relations, to ensure the supply of oil long-term stability.

Second is the throttle, which effectively through energy conservation and other means to explore the use of disposable energy. Disposable energy for China is always limited. How to optimize its efficiency is efficient functioning of the fundamental measures. Needless to say, compared with developed countries, China's energy efficiency is shameful. In this respect, optimize the energy-saving technology is essential, train people's energy saving consciousness and its related quality is indispensable.

### *3.2 Consciously participate in power energy strategy game*

Daniel Y. (2008) pointed that china has become an important player in world oil industry. The oil consumption of china is more than Japan, and china has become the second largest oil market after the United States. Energy, especially oil, plays obvious effect on modern market economy, as the world second largest economy china is deeply dependent on energy. Under the background of economic globalization, the irreversible trend, participating in the great powers' energy strategy game has become an inevitable choice for China .There are great differences between passive participation and consciously participation .We could find that in various aspects great powers have ambiguity psychology and containment strategies for china rising peacefully, as an old Chinese saying "the mind of Simazhao, no secret". As a responsible power China would promote developing peacefully, as well realize the truth that dignity from strength. The international trade follows the game rules that there are only eternal interests, while no eternal friendship, the game rule could be not revised by the peaceful, magnanimous tolerance Chinese people. China enjoys in accordance with the game rule, equally exchange, mutual benefit and win-win principle in market economy, but when it comes to the problem that impacts the country's core interest we never show the white feather. For the energy that matter the country peaceful rise, China should do best to keep it steady. Therefore it is more reasonable to apply the political, economic, cultural, public opinion and military strength and means, the most important, maybe it dare "drawing sword", dare to say "no" at critical moment.

### *3.3 To ensure the security and stability of the energy supplies*

Unlike the United States, there are nearly 20 countries beside China. No matter which country has a gate fire, it will infect other banks .So the construction of powerful national defense is the first choice for China. The Chinese has peace-loving historical tradition, never covet other countries territorial or resources .After the foundation of the People's Republic of China, except other country compels or invites us, Chinese troops never get out of territory. Before the reforming and opening, the fundamental key of China's defense strategy is defense, namely protecting the family and nation. "Deep caves and wide accumulate grain, no hegemony". During the period the construction of atomic bomb , missile , satellite ,

long wave platform, nuclear submarines, which the nation paid lot of efforts all belong to the defense system. As the increase of comprehensive country power, the needs of foreign relations, Chinese troops begin to participate in UN peace keeping missions; Somali escort etc, its fundamental key is still based on defense rather than external expansion. Now, as half of the oil supplied from overseas, allocating ocean strength that ensures the security and stability of the energy supplication is imminent. Given the ineligible military exercises it should not only start as soon as possible, and be sure to make it as soon as possible. The original intention and end-result to do so is still self-preservation rather than the expansion. No matter review the experiences and lessons of the rising great powers in history, or prospect the future of human society, doing above is a precautions averts perils, the advantages far outweigh the disadvantage.

#### 4. Conclusion

Fundamentally ,in order to scientifically establish China's energy strategy, people have to form consciousness in the opinion such as the constraint of certainty and uncertainty, sustainable moderate scale; Strategies should be balanced China energy self-sufficient with international energy market development, And through the means such as effective energy saving and emission reduction utilize the disposable energy, pay attention to the energy strategy game with other big powers, especially to form ocean strength that ensure the security and stability of the energy supplication. Only that can ensure the country's energy strategy is effective and feasible.

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